

AF-15 Expand Use of Forest Biomass Feedstocks for Energy Production (Fuel Blending and/or Switching)

Benefit/Cost of Reducing CO₂e:

Arizona: 4.5 MMt between 2007-2020; 0.1% of 2020 emissions; \$-8/ton
New Mexico: 2.6 MMt between 2007-2020; 0.3% of 2020 emissions; \$-76/ton
Colorado: 0.1-1.0 MMt or higher; less than \$5-50/ton
Oregon: 3.2 MMt between 2007-25; 3.3% of 2025 emissions; cost effective

Assessment: Medium Priority. Bin D. 6 out of 22 votes.

Fuel blending is the partial replacement of an existing fossil fuel with a biomass fuel in an energy application. Fuel switching is the complete substitution of a biomass fuel for a fossil fuel. In some applications, fuel switching may be possible. Examples include direct heat pellet or wood chip boilers and thermal electric power plants. The design of some thermal plants, however, may not allow for fuel-switching or even blending. Applications need to be evaluated on a case-by-case basis.

Wood biomass is important because it is carbon neutral and renewable. Incentives, such as tax credits, should be enhanced to encourage this option.

Oregon's assessment noted that creating a market for biomass from forests is key to this option. It is important to locate biomass fueled generating plants close to forests to reduce the economic and GHG costs of shipping.

California is prohibited from purchasing CO₂ intense electricity. This has caused problems for IPP which is now considering co-firing with wood waste or other renewable sources.

The potential for economic extraction is unknown, and we need more information on the biomass inventory, in terms of what can be grown in Utah given water and other constraints, and what would be required to increase harvest at the scale to produce a significant amount of power. It can be costly and/or politically difficult to get product from forests to power generation facilities/energy consumption options.